Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION

November 2023

www.egara.club

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Hamfest 2024 Set for June 2nd

Next year's EGARA Hamfest will return to the East Greenbush Fire House pavilion and will be held on a Sunday for the first time as the club marks the event's 20th anniversary. For the past two years, the annual swap meet had been held at the East Greenbush Town Park. Prior to that, it had been at the fire department's facilities.

Hamfest 2024 will return to the East Greenbush Fire Department pavilion on Sunday, June 2nd

"The park was a great location, but price increases for its rental was cutting into the club's revenues from the event," said EGARA President Bryan Jackson, W2RBJ. "Hamfest is the club's biggest single income source and we felt it was important to take that into consideration."

The choice to hold next year's Hamfest on a Sunday was due to the availability of the facility. "The only Saturday open was on Memorial Day weekend and it was decided that wasn't feasible as most people have plans then to celebrate the unofficial start of summer with family and friends.

The lower cost of the fire department facilities is also expected to allow the club to better hold the line on prices for those who attend the event.

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Fall VE Session Mints New Licenses for Two

EGARA's fall VE exam session on October 28th saw one new Technician licensed while another earned a much coveted Extra ticket.

Ed Munn is congratulated on passing his Tech license by John Fisher, W2JSF

Ed Munn of Menands passed his Technician test and Robert Beck, Jr. of Wynantskill, KE2BUG, scored his Extra license.

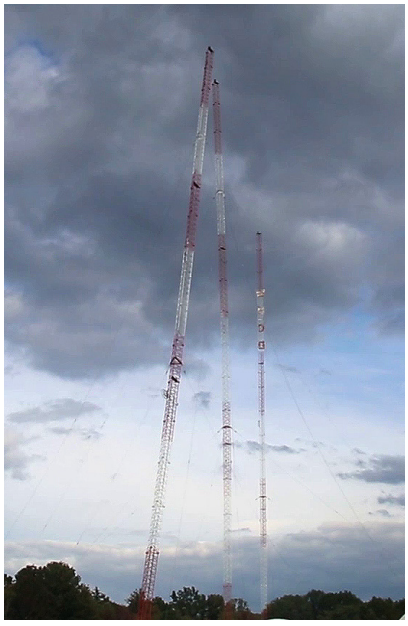
There was also a great turnout by VEs to administer the exams. They included: Peggy Donnelly, KD2LMU, Steve VanSickle, WB2HPR, Walt Synder, N2WJR, Pete Sochocki, NY2V, Tom Scoresone, KC2FCP. John Fisher, W2JSF, Bill Surprenant, W2SUR, Dave Williams, N2VLQ, and Bryan Jackson, W2RBJ.

Next Membership Meeting - November 8, 2023 - 7 pm - Loop Antennas

Last Vestiges of the Famous 1540 Disappear from the Local Skyline

By Bryan Jackson, W2RBJ

For Capital District Baby Boomers, WPTR -- "The Famous 1540" – was the 50,000 watt Rock n' Roll powerhouse they grew up with. And for 75 years, its three mighty 365 foot steel antennas dominated the Colonie skyline along Central Avenue near Route 155. But October 10th those iconic towers fell, gone in just seconds after standing for a lifetime.



The first tower begins to fall after its guy wires are cut

The original WPTR took to the airwaves in August 1948 and eventually became the number one Top 40 station in the market during the 1950s, 60s and 70s. Its massive signal brought the hottest hits of the day and dozens of friendly voices such as "Boom Boom" Brannigan, Charlie Brown, Bob Badger, and Bruce Wayne (the Batman TV show was big back then). The station also had a fully staffed news department, featuring well-known broadcast journalists that included Tracy Egan, Bob Lawson and Doug Meyers.

"Boom Boom Branigan" with a group of his fans

For myself, I had the honor of doing the Saturday night show in the mid-1970s under the synonym "Mike Williams." It turned out the station had about 20 pre-recorded jingles with various disk jockey names being sung. Each time a new jock was hired, the next name on the jingle tape would be given to the new on-air addition. I was actually the third Mike Williams, as the names would be recycled as the talent changed over the years.

But what a thrill it was to turn on that microphone, knowing there were thousands of people listening. WPTR was directional to the northeast, using its three towers to push its signal to avoid interference with other stations to the west and south. As a result, the station was a "flamethrower" with its 50,000 watts blanketing the Adirondacks, New England and the Canadian Maritimes. For a while, WPTR was even rated among Boston's top three stations at night, beating out Beantown's own WMEX, another Top 40 rocker. In fact, I would get mail from Greenland – some 2,000 miles away -- asking for requests and dedications on my Saturday night show.

THE KNICKERBOCKER NEWS Home Edition

28 DIE IN ALBANY AIR CRASH; PLANE HITS RADIO TOWERS

Albanian Among Dead; Area Couple Aboard

Although the WPTR towers delivered music and fun to thousands, they also harbored a tragedy. On September 16, 1953, American Airlines Flight 723 flew between the station's center and north towers while attempting to find the Albany Airport in heavy fog. The collision ripped off sections of both wings and the plane crashed just to the north of Central Avenue, narrowly missing a trailer park. Sadly, the crash killed all 28 people on board and it remains the area's deadliest air accident.

For the original WPTR, changes in tastes and technology eventually saw its slow, painful demise. As FM stations became more popular with younger listeners, the station's ratings entered a steady decline in the mid-1970s.

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Former WPTR Towers Taken Down After 75 Years...

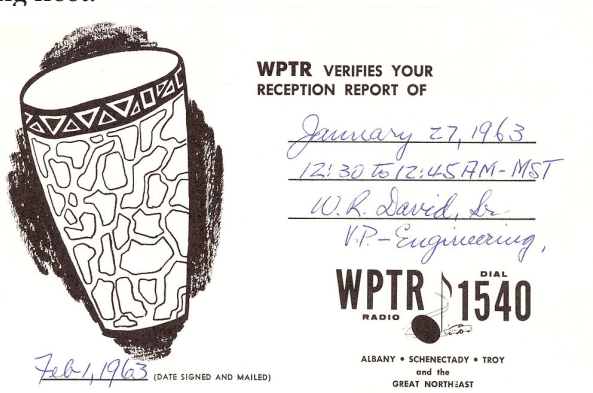
First built in 1948, the towers were highly visible from Central Avenue in Colonie, with the WPTR call letters on the North tower for many year

By 1980 the station's owner, Rust Communications, dropped the Top 40 format and switched to country music with veteran disk jockey J.W. Wagner at the helm during morning drive. The station regained some popularity, and even added AM Stereo, helping to make the station stay relatively successful. However, competition from FM continued and WPTR tried experimenting with several different formats, including talk, sports, and news – all with meager results.

The station eventually became the property of Crawford Broadcasting, which changed the call sign to WDCD, in honor of founder Don Crawford. The format was also changed again, this time to Christian programming. Still finding no success, in 2000 the company then launched the "Legends" music format of adult standards and returned the classic WPTR call letters to the station. To help boost the new format, it even brought back "Boom Boom" Brannigan as morning host.

The "Legends" format was a ratings success and put WPTR back in the top 10 for the first time in 15 years. Still, the station found itself struggling financially as more FM stations were added to the market, along with an ever growing competition for advertising dollars. Formats and call letters were swapped again, but to no avail.

Operating the station -- and paying the massive electric bill for its 50,000 watt transmitter – left no choice but to shut it down. The once "Famous 1540" left the air for the last time on October 16, 2017 and a year later the license was surrendered to the Federal Communications Commission.



WPTR QSL Card from 1963

For the past six years, the former station's three antennas stood behind the transmitter building on Albany Street in Colonie waiting for the redevelopment of the 19 acre property -- which would require the removal of the towers. After standing for 75 years, the end finally came as the supporting guy wires were cut and the towers crumpled to the ground.

Today, the WPTR call letters are still on the air, used as a tribute by Schenectady's 1240 AM – the former WSNY. Meanwhile, there's still a future for those original WPTR towers. They'll be recycled -- and just could be part of your next new car.

Above Left: EGARA President and former WPTR disc jockey Bryan Jackson stands between the demolished north and central antenna towers. These two towers were hit in September 1953 by an American Airlines plane, killing all 28 people on board.

On the Beam
News & Notes

Annual Holiday Party Set for December 13th

EGARA's Christmas party will be held at Moscatiello's Family Italian Restaurant on Wednesday, December 13th. A cocktail hour will begin at 5:30 pm, followed by dinner at 6:30 pm. Dinner will be ordered from the menu and there will be separate checks.

Once again, Santa will be raffling off gifts after the meal and each person attending will be given a free ticket.

In order to give the restaurant an accurate number of those planning to attend, RSVPs MUST be made no later than December 11th. RSVPs may be made by email to W2RBJ@outlook.com.

FCC Wants to Bolster Amateur Radio

Commission will vote in November on plan to remove outdated technical restrictions
By Randy J. Stine, Radio World

FCC Chairwoman Jessica Rosenworcel says the FCC plans to "incentivize innovation and experimentation in the amateur radio bands" by getting rid of outdated restrictions and providing licensees with the flexibility to use modern digital emissions.

The commission at its November meeting is expected to take action on a Report and Order that would eliminate the baud rate limitation and establish a bandwidth limitation in the amateur radio bands below 29.7 MHz. The order being circulated for tentative consideration by the commission would remove the baud rate limitation — the rate at which the carrier waveform amplitude, frequency and/or phase is varied to transmit information — for data emissions in the amateur radio bands, the FCC says. The current baud rate limits were adopted in 1980.

The order would implement a 2.8 kilohertz bandwidth limitation in place of the baud rate in amateur radio bands. The 2.8 kHz limitation is consistent with the commission's treatment of other wireless radio services, the FCC says. The current rules limit the baud rate for high-frequency amateur radioteletype/data transmissions to 300 baud for frequencies below 28 MHz (except in the 60-meter band), and 1200 baud in the 10 meter (28-29.7 MHZ) band. The Wireless Telecommunications Bureau says the change in technical standards would allow the amateur radio service to operate more efficiently, including during times of emergency to support public safety.

The American Radio Relay League (ARRL) in 2013 asked the commission to delete references to the baud rate and to establish a bandwidth limitation of 2.8 kHz. The group argued the public safety benefits of making the change. ARRL stated: "[i]ncreasing speed is especially important when amateurs voluntarily assist during and after hurricanes, forest fires and other disasters."

At the time, ARRL also told the FCC that eliminating the baud rate limitation will "incentivize innovation by allowing more data to be transmitted within each signal without increasing bandwidth from that currently used."

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EGARA October Meeting Minutes

- The October meeting of the EGARA was called to order by President Bryan Jackson, W2RBJ at 7:00 PM. There were 22 members in attendance at the Masonic Temple. After a round-robin introduction, the raffle was conducted, and several nice prizes were given out.
- Bryan Jackson, W2RBJ, gave his President's report as follows:
- Due to mechanical issues, the annual boat trip has been canceled.
- A VE session is scheduled for October 28th at the East Greenbush Town Library.
- An on-line study session for General Class License is available – Bryan will send details via email.
- ARRL membership renewals can be made through the club – the club receives a $5.00 payment.
- Karen Smith, KS2O is in need of volunteers for the annual Pumpkin Patrol –on October 30 and 31st. An email link will be sent to club members.
- The Masonic Lodge monthly cleaning will be done the week of the 16th. Please help out to make the job go easier. An email reminder will be sent.
- The key for the basement access will be stored in the garden shed.
- The generator retrieved from the old WABY site for possible Field Day use is beyond repair. Perhaps used batteries can be obtained from businesses that regularly change their backup batteries.
- The annual Christmas party will be held on Wednesday, December 13th. The location to be announced.
- A volunteer is needed to act as program chair. Some ideas include antenna workshops. Members are invited to make presentations at the club meetings.
- The former WPTR towers were demolished on Tuesday, October 10th. Bryan recalled the former glory days of the station and his time there as DJ. One interesting tale related to using "2x4 technology" to get the transmitter back on the air. Another story relate to an airplane strike to one of the three towers.
- A lengthy discussion was had regarding next years hamfest. Bottom line: No date, no time, and no location determined.
- VP report – none given.
- Treasurers Report: Don Mayotte, KB2CDX said that he will not seek re-election, and is thankful for the dues renewal and participation in the monthly raffle.
- Secretary Report: Steve VanSickle, WB2HPR reminded members that previous minutes are available on the club website. Also, The ARRL is asking members to comment on the Proposed rule making regarding the 60 meter band. Bryan will send out the links to the FCC website for comments.
- No old business. No new business.
- Refreshments were enjoyed by the membership. The meeting was adjourned at approximately 8:13 PM.
- Minutes recorded by Secretary Steve VanSickle, WB2HPR

The History of Ham Radio: Stability, Accuracy, Purity

Chris Codella, W2PA, author, John Pelham, W1JA, editor, Phil Johnson, W2SQ, editor

(Editor's note: By special arrangement with the authors, Sidebands is pleased to present this multi-part series on the history of ham radio. Subsequent chapters will be published in future monthly editions of the newsletter)

Hiram Percy Maxim long considered precise frequency control to be the biggest challenge in amateur radio. All at once it was set to become everyone's concern when the new international treaty would take effect in 1929. "As we climb up into the super frequencies, as we do when we use forty meters and below, frequency precision becomes a problem of the first magnitude," he wrote in Summer 1928. But he was certain that amateurs could devise new techniques and figure out how to meet this challenge as they had with so many others. Anticipating an international backlash should amateurs stray outside the bands, he urged everyone to "For goodness' sake get inside your band and stay inside."

A new radio world dawned on New Year's Day. "January 1st marks the dividing line between the old and the new in amateur radio," declared Warner in his opening editorial in January 1929 QST. Although amateur radio was the victim of "stupidity and crass greed, and fear and lack of knowledge of us" at the Washington Convention of 1927, it nevertheless had secured a permanent position among the recognized group of worldwide radio services, and retained a set of exclusive frequency bands, albeit smaller than they had been. Progress in transmitter and receiver design in just the past year was a cause for great optimism about continuing "to exact from amateur radio that full measure of enjoyment which for so many years has held us in thrall to it." In fact, the convention may have been a blessing in disguise, he contended, that would spur amateurs to improve the sharpness and purity of their transmitted signals, the selectivity of their receivers, and the accuracy with which frequency was determined in both—all things that should have been done long ago.

The last two years had produced a new law, an international radio treaty and new federal regulations. Together they were dramatically changing how amateurs viewed the radio spectrum. Maxim's concerns with frequency precision were well justified, and while precise frequency determination was still quite a challenge, amateurs had to at least be sure they were hitting the new bands.

To help manage the frequency control problem, the ARRL announced in November 1928 a new field appointment called Official Frequency Station. The currently nominal 2% accuracy in frequency was simply inadequate on the higher bands. On 40 meters, for example, this amounted to 140 kHz, which meant that a station could operate only between 7,140 and 7,160 and still be confident of being in the band. And on 20 meters that level of inaccuracy made it impossible to operate anywhere in the band and still be sure of being inside its edges!

The new service called standard frequency transmissions from the Bureau of Standards would maintain an accuracy of 0.1% to 1%, which helped improve the situation somewhat. An ARRL OFS would be capable of 0.5% accuracy—that's 35 kHz in the 40 meter band, about as good as any amateur station was capable of in 1929. Don Wallace, W6AM, led the committee on Official Frequency Stations as its chairman.

But accurately measuring frequency was not enough. Everyone together had to fit into those bands. Broad and wandering signals could no longer be tolerated. Amateurs had seen this before, of course; it was the same reason spark had been outlawed.

Transmitters must had to become more stable and produce signals that were no wider than necessary, and receivers had to become more selective and not produce signals of their own. And both had to become much more accurate. Amateurs began to refer to a new, yet-to-be-invented class of equipment as 1929-type because that would be the first year on the other side of Warner's technological dividing line separating old from new.

QST Technical Editor Robert Kruse had begun laying the groundwork for 1929 in a series of articles that ran through 1927 and 1928, beginning with a review of the basics of vacuum tube circuits, including oscillators for transmitting and receiving. Hartley, Meissner, Armstrong, Colpitts and others—he explained them all. Because he worked each circuit up from simple, minimal versions and then derived one by tinkering with another, explaining the tradeoffs involved in each one, Kruse's series is instructional and relevant even today.

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History of Ham Radio...

The next year, in Spring 1929, QST began a one-year series of articles focusing on improving equipment and called it the Technical Development Program. For transmitters this included power supply filtering, rectifiers, and crystal oscillators; for receivers, calibrated wave meters, bandpass filters, and shielded inter-stage transformers; and for both, band switching using interchangeable, pluggable coils, and more precise, repeatable frequency selection or band spread. And of particular interest to both broadcasters and amateurs was the development of increasingly sophisticated techniques for radiotelephone, particularly 100% modulation and linear amplifiers.

To recognize progress Handy began listing stations nominated by ARRL Section Managers as having the best signals observed on the air. To qualify, a station had to be heard by two independent observers and over several different times—a precursor to the A-1 Operator Club.

To further encourage the development of better equipment, the ARRL announced in early 1929 that a trophy cup and cash prizes ($25, $15, and $10) would be awarded the following January for the best photos and descriptions of 1929-type stations as judged by the editors of QST. Competition was open to ARRL members in all countries, except for the headquarters staff. Their hope was that amateurs would start with the techniques published recently in the series of QST articles and move beyond them in interesting and effective new ways. Each month the best submission up to that date would be chosen for publication. Winners for 1929 would be selected from those published during the year.

The features to be considered by the judges included (as expressed in QST):

- Ingenuity employed in design, construction and arrangement
- The transmitter
- The receiver
- Power supply for the transmitter
- The antenna system
- Change-over arrangements
- Provisions for monitoring transmitter output for quality
- Provisions for accurately knowing the emitted frequency of the transmitter
- Provisions for working on different bands
- Provisions for rapid and accurate change of frequency within each band
- The goodness of the keying system
- Workmanship
- Extent to which the apparatus is “homemade”
- Interest and intelligibility of the descriptive manuscript and illustrations

In January, H. L. O’Heffernan, G5BY, was declared the winner, with W8CEO, W1WV and W8BQ placing next in order. O’Heffernan had also been the top scorer in both the 1927 and 1928 International Relay Parties as 5BY before prefixes were in use. After the second event, he scrapped his entire relay-party-winning station and set out that spring to construct new equipment specifically designed to meet the requirements of a 1929-type station, with expenses considered “of secondary consideration,” and got it on the air that November, more than one month early.

His transmitter used a crystal controlled oscillator for stability and accuracy, but did not trade off flexibility, the usual sacrifice. It was built with two pairs of crystals, one pair at each end of the band, which could be selected by a rotary switch. The crystal sockets and switch were all homemade like the rest of the station. This arrangement allowed him to shift between two frequencies to avoid interference without retuning, in whichever end of the band he happened to be operating. The oscillator produced a 3,500 kHz signal, which fed a cascade of one or two frequency doubling stages, thus selecting either the 7-MHz or 14-MHz band. Interchangeable tank coils enabled band selection in the second doubler and final amplifier stages.

The keying scheme used a technique introduced two years earlier in QST for eliminating key clicks and back-wave. A capacitor coupling the oscillator output to the first frequency doubler had one of its plates mounted to the arm of a telegraph sounder that was energized by the keying circuit.

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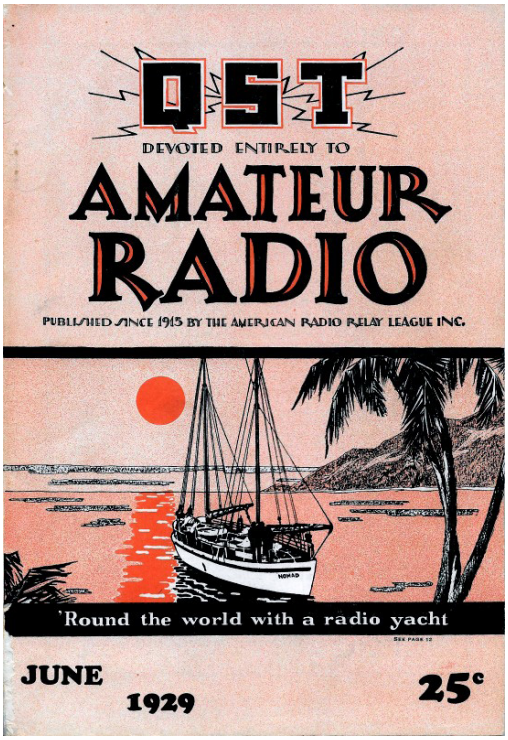
History of Ham Radio...



In 1929, QST began featuring a series of articles on improving equipment

When the key was pressed, the capacitor plates came together pressing on its mica insulator for maximum capacitance, allowing the signal to pass. When the key was lifted, the capacitor plates would separate and cause the signal to die out. A similar sounder-manipulated capacitor was inserted in the output lead connecting to the antenna. Together, they served to soften the keying characteristic to completely eliminate clicks (or thumps, as they were called), suppressed the key-up signal (back-wave), and allowed the oscillator to run uninterrupted and therefore maintain a very stable frequency. A third relay operated from the same keying line switched the antenna between transmitter and receiver for break-in operation. His full wave Zeppelin antenna for 14 MHz operated as a half wave on 7 MHz and was fed with parallel feeders spaced 8 inches apart with paraffin-soaked wooden insulators.

While the resulting signal may have been free of clicks and thumps, one can imagine the racket inside the operating room as the transmitter was keyed. But since it was entirely controlled by this system of relays, it could easily be operated remotely, one of O'Heffernan's design intentions. His relatively portable receiver could be quickly disconnected from the antenna and batteries in the radio room, set up on a table at bed side with a duplicate power supply and separate receiving antenna. In a matter of minutes he could be operating while in bed (and did so), sacrificing only his ability to change transmit frequency. While not strictly a 1929-type station requirement, this may have been a breakthrough in mitigating operator fatigue (or at least accommodating it).

Power for the transmitter was derived from the 200-volt, 50-Hz residential electrical service using a collection of transformers to power filaments, transmitter signal generation tubes and final amplifier. The most critical power source for a clean signal was the high-voltage supply for the oscillator—the only one to use a full-wave vacuum tube rectifier with capacitors and chokes for filtering. This gave the station its pure CW note. The other tubes had their own transformers and chemical (or electrolytic) rectifiers made from two-pound jam jars filled with an electrolyte solution of borax and distilled water. Twenty-five jars in series on each side of the 1400-volt transformer secondary together with filter capacitors supplied DC for the amplifier stage, and another setup using fifteen on each side of the lower HV supply for the other tubes, totaling eighty jars in all—some serious home brewing! Most of the power supply was located in the basement below the operating room. A bank of batteries supplied the grid bias.

O'Heffernan's four-tube regenerative receiver was built directly from a design in QST that contained several 1929-type features such as increased selectivity and finer tuning on the higher frequencies. But since most transmitters on the air were still unstable in one way or another, increasing selectivity to help eliminate QRM became counterproductive beyond a point where the received signal would not stay within the passband. (It's unclear exactly how narrow his threshold was, but may have been around 1 or 2 kHz.)

Separate "midget" variable capacitors were used for changing bands, in a home made plug-in arrangement designed to preserve calibration. Each higher-frequency band capacitor had plates removed to reduce its capacitance in order to spread out the tuning rate. A commercial tuning mechanism with a drum dial permitted these capacitors to be interchanged relatively easily without disturbing the front panel control.

Rounding out the station was the dual purpose signal monitor and frequency meter, an essential component in a 1929-type station. As a monitor, it allowed O'Heffernan to hear his signal while transmitting. When calibrated to the transmitter's crystals, it could be used as a heterodyne frequency meter with a claimed accuracy of 0.1%.

The next generation of amateur radio station had arrived, prompted yet again by the booming proliferation of radio services and the resulting international tightening of amateur regulations.

Member Report: The Annual Conference of the Antique Wireless Association

By Steve Van sickle, WB2HPR

The 2023 AWA conference was held on September 26 – 30 at the RIT Inn and Conference Center near Rochester. This year's theme was the history of broadcast radio in the 1920's. It was an opportunity to meet other antique radio collectors and restorers, as well as a chance to attend some very scholarly presentations dealing with all things (mostly) related to the very early days of radio broadcast. When I heard about the planned event, I became interested and decided to go, as I have an appreciation for old radios – mainly the kind that are enclosed in wooden cabinets!

A display featuring a collection of antique telegraph keys at the AWA Conference

Various antique transmitting tubes at the flea market

The RIT Inn and Conference Center is a modern facility and is ideal for the venue - they are equipped to host large events, as well as offer room and board for the attendees. The five day's events include a flea market, and free admission to the AWA Museum, which is located about 30 minutes away, in Victor, NY.

There were 10 seminars, and four were specifically focused on the 1920's era. Other topics included the BOSE acoustic wave radio technology, radio communications during the Vietnam War, the Hewlett Packard–Barney Oliver amplifier, and a special presentation by NASA representative Jim Porter dealing with LASER communications technology.

There were plenty of break periods and several lunches and dinners during the week, thus allowing old friends and attendees to get reacquainted and catch up on the latest old -radio "news". On Wednesday evening, the Edward M Gable Amateur Radio Station was dedicated at the AWA museum. If readers want a world- class experience into the world of antique radio, the AWA is a great destination – and is in fact, a reasonable day trip from the Capital Region.

There was an old equipment contest, and awards presented in several categories. On Friday evening, following the AWA membership meeting and the annual banquet, the equipment contest winners were announced. During the week-long conference, the AWA conducted its annual book fair – there were hundreds of rare and hard-to-find and out-of-print books and literature available for purchase.

I really enjoyed my time at the conference. The seminars were well-presented by recognized experts, and the follow-up Q/A sessions provided a rare opportunity to gain much information on some of the minutiae of the old radio collecting hobby. I haven't been to this conference in quite a few years, and although the theme of the seminars has changed, the quality and value of the event is enough to make me want to go back again.

The next AWA Conference is already being planned, and is scheduled for October 1 through 5, 2024 – again at the RIT Inn and Conference. I would expect that this will be another worth while event and a great opportunity to learn about radio history.

Right: A post card of the WRGB studio from 1946 was for sale at the AWA book fair

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FCC Looking to Bolster Amateur Radio....

A spokesperson for ARRL says the organization supports the proposed action and the proposal of further notice. In a subsequent Notice of Proposed Rulemaking in 2016 (WT Docket No. 16-239), the FCC tentatively concluded that a 2.8 kilohertz bandwidth limitation for radioteletype and data emissions in the MF/HF bands was not necessary, and sought comment.

A few commenters at the time of the NPRM opposed any rule change, arguing that the existing rules should be retained in order to protect access to amateur bands by Morse code and other narrowband transmissions. However, the commission writes in the order: "Based on the record in this proceeding, we find that the baud rate limitation has become outdated and hampers, rather than promotes, innovation and robust use of the amateur bands."

The commission continued in the new order: "We are persuaded by the weight of the record in this proceeding that, without a baud rate or bandwidth limit, data stations using a large amount of spectrum for a single emission could do so to the detriment of simultaneous use by other stations using narrowband emission modes."

In essence, the technical change mean amateurs will require less time to transmit messages, which in turn will open up more spectrum in the time domain for more amateurs to use, said David Siddall, general counsel for ARRL.

"This is a very simple change. In 1980, at the inception of digital technologies that could be used by radio amateurs, the FCC adopted a speed limit of 300 baud for the stated purpose of limiting the amount of spectrum occupied by any single signal," Siddall said. "Radio amateurs, being tinkerers and experimenters, worked to develop faster and faster speeds that still fit within the standard spectrum bandwidth. Eventually their innovations to the technology significantly increased spectrum efficiency but ran up against the FCC baud rate limit."

One of the benefits of the changes will be allowing for "faster emergency communications" by volunteer ham radio operators during emergencies, the FCC says. The agency says its Wireless Telecommunications Bureau's Mobility Division has previously issued waivers allowing amateur operators directly involved with disaster relief efforts to exceed the baud rate limitation in the interest of public safety.

The FCC at its November meeting will also consider a Further Notice of Proposed Rulemaking (FNPRM) that proposes to remove the baud rate limitation in the 2200 meter and 630 meter bands. The commission also proposes to remove the baud rate limitation in the very high frequency (VHF) and ultra-high frequency (UHF) bands. The commission says it expects to seek comment on the appropriate bandwidth limitation for the 2200 meter band, the 630 meter band, and the VHF and UHF bands.

Steve Stroh, editor of amateur radio newsletter Zero Retries, says the need for improved data communications in amateur radio also coincides with spectrum becoming more "noisy" due to "pollution" by systems such as LED lighting, small switching power supplies and even solar panels.

"That noise has an outsize impact on analog modes such as voice and very low power transmissions. Improved data communications modes, including digital voice modes, can overcome the noise issues," Stroh said in an email to Radio World.

Stroh says he is happy to see the FCC address the same limitation on the amateur radio VHF and UHF bands — where there is arguably much greater potential for technological innovation in data communications technology — if it wasn't for the data rate and mode limitations.

"Fortunately, in its proposal, the FCC recognizes that the symbol rate and mode issue does include the Amateur Radio VHF and UHF bands. Thus the FCC's proposal is a very good one that will significantly benefit Amateur Radio," he said.

The FCC's next meeting is scheduled for November 15. A comment period on the FNPRM will commence 30 days after the date of publication in the Federal Register.

About the Author: Randy J. Stine has spent the past 40 years working in audio production and broadcast radio news. He joined Radio World in 1997 and covers new technology and regulatory issues. He has a B.A. in journalism from Michigan State University.

WOOFFERTON SHORTWAVE STATION TURNS 80

Woofferton Transmitting Station celebrated its 80th anniversary on Tuesday, October 17th with about 100 guests attending the station's birthday party. Encompass Digital Media, the current owner/operator of the site, said Woofferton is the only remaining shortwave radio transmitter site in the United Kingdom. It carries news and information for the BBC and other international broadcasters.

The station was originally built by the BBC during World War II to house additional shortwave (HF) broadcasting transmitters. When it officially started broadcasting on October 17, 1943 it had six 50 kW RCA transmitters, obtained by lend-lease.

The Marconi BD272. Installed in 1963, it's still operational today

The site has been modernized many times over the years and is now DRM (Digital Radio Mondiale) capable providing daily digital radio programmes. Woofferton is used to broadcast shortwave radio programmes on HF 4 MHz – 26 MHz to Europe, Russia, North/ Central Africa, Middle East and South America for BBC World Service, Deutsche Welle, Voice of America, and Voice of Vietnam, among other international broadcasters.

The site is also used for satellite communications and monitoring. During the event, local dignitaries unveiled an original architect's drawing of the site and switched on a special anniversary broadcast celebrating the site's rich history. The frequency for North America used the oldest transmitter at the site, a Marconi BD272 dating from 1963, which is maintained in working condition.

Commercial Director, Radio Services Paul Firth said, "We are proud to continue to sustain Woofferton's vital work in transmitting shortwave around the world whilst also developing its capabilities to ensure it can keep pace with technological developments in radio and satellite distribution."

Encompass invited shortwave listeners to submit reception reports and said it received hundreds of responses.

Left: The mayor of Leominster, Allan Williams, switches on the commemorative broadcast.

FCC Deadline Extended to November 28th for 60-Meter Comments

The deadline to file comments on the 60-meter band proposal has been extended by the Federal Communications Commission (FCC) to November 28, 2023. Replies to comments will be due December 28, 2023. The public comment period was originally to close October 30, 2023.

The ARRL strongly encourages all amateurs to submit comments expressing support to the FCC for the current 100 W ERP power limit (instead of reducing the power limit to 15 W EIRP) and continuing secondary access to the current channels.

ARRL has assembled a web page with instructions on how to submit your comments, as well as background information on the issue at: https://www.arrl.org/60-meter-band.

Hams Worry About Shortwave Proposal

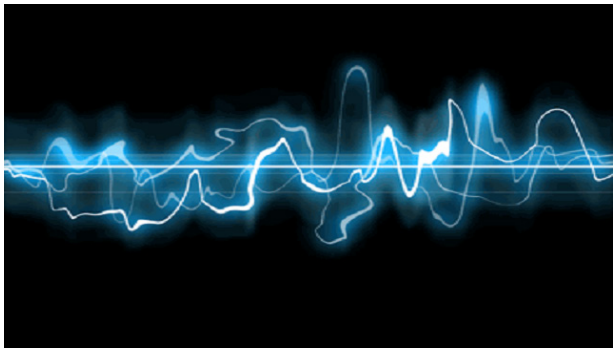
The U.S. Coast Guard also is concerned about petition from the Shortwave Modernization Coalition

Numerous commenters have told the FCC that a proposal to "modernize" the shortwave band is a threat to amateur radio operators in the United States and possibly the end of ham radio as we know it. And hams are just one source of opposition to the idea. The FCC inquiry was prompted by a request from the Shortwave Modernization Coalition for a rulemaking to amend the Part 90 rules.

SMC believes there is underutilized spectrum in the high-frequency bands. The coalition wants to use 20 kW transmitters for the transmission of time-sensitive data from fixed stations. It wants the FCC to allow these fixed, long-distance, non-voice communications in multiple bands between 2 MHz and 25 MHz. Ham opponents worry about interference. One also characterized the coalition as being "packed with special interest groups that harbor little interest in shortwave modernization beyond their own needs to getting faster financial market information."

The commission's Office of the Managing Director sought comments on its proposal this summer. The petition, RM-11953, drew more than 800 comments.

"Significant" interference



Financial traders have been using shortwave links for several years under experimental licenses granted by the FCC to send data between U.S. and foreign exchanges in the band's Industrial/Business Pool frequencies. The coalition seeks a permanent solution including business licensing of commercial activities. The proposal would prohibit voice transmission and mobile operations. But while it excludes amateur bands, it does involve high-power operations on spectrum adjacent to frequencies used by the Amateur Radio Service, according to people watching the issue.

Opponents say this would put hundreds of thousands of licensed American amateur radio operators at risk of receiving interference, while SMC believes any interference would be significantly below the noise floor. Some commenters also said the petition fails to provide complete disclosure of the actual effective radiated power of those 20 kW transmitters, which they say could exceed 200 kW thanks to antenna gain.

The American Radio Relay League called the proposal seriously flawed.

"Many of the subject Part 90 bands are immediately adjacent or very near to spectrum bands that are allocated to the Amateur Radio Service on a primary basis," ARRL wrote. "These bands are very heavily used for worldwide communication by amateur radio licensees employing significantly less power than that proposed by SMC for purposes that include vital support during disaster recovery and mitigation, technical and scientific experiments, and propagation studies."

ARRL says its laboratory conducted a detailed technical review over several months to determine if the proposed rules would affect radio amateurs.

"ARRL's analysis determined that, if the proposed rules are adopted, the new operations inevitably will cause significant harmful interference to many users of adjacent and nearby spectrum, including amateur radio licensees."

AARL adds: "SMC also proposes to substantially lessen the protections required to protect adjacent and neighboring licensees … using digital schemes with 50 kHz bandwidths and 20,000 watts of power."

Hundreds of licensed amateurs filed comments in the docket, expressing overwhelming opposition for various reasons.

"Frequent solar emissions introduce noise in the shortwave bands that will likely interfere with these proposed signals, making them unusable for the purpose of reliably providing high-speed transmission of financial data," wrote ham Robert Kirkland Smith. "I think the coalition would be better served to stay with the more secure and noise-resistant means of fiber-optic systems for their data transmission needs."

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Hams Worry About Shortwave Proposal...

Another commenter from the amateur community said the FCC's ability to track and solve any possible interference issues is severely lacking.

"The commission is already overtaxed to resolve a variety of spectrum interference complaints from a variety of existing users," wrote Lee F. Ilse. "Given that the requested authorization for higher-power transmissions is virtually guaranteed to cause additional interference, I respectfully suggest it would be highly irresponsible for the commission to adopt the suggested changes without a significant increase in resources dedicated to enforcement."

Longtime ham Joseph Lee McLaughlin told the FCC: "Radio amateurs will encounter considerably more difficulty communicating over these bands. The effect of spurious emissions and interference from the high-power digital transmissions … exhibit a moderate level of harmful interference to most amateurs who use the portions of the radio spectrum adjacent to these transmissions," he wrote. "The most harmful interference will occur with marginal operators and marginal operating conditions such as long-distance, transcontinental and DX operations."

One commenter suggested using a "guard band equal [to] or greater than the transmission bandwidth between the edge of the signal and the edge of the land mobile band." Another veteran ham said the 20 kW power suggested by SMC "is truly overkill for digital signals."

"Force multiplier"

There are others who took aim at the financial companies in the coalition, citing ethical concerns.

"The question before the commission is whether this proceeding really serves a public interest or merely enables a very small number of individuals and firms to further enrich themselves at the expense of consuming actual bandwidth and raising the noise floor of adjacent bandwidth. I am inclined to think the public interest is not well served in this case," wrote Frederick L. Stiles.

Then there is the public service aspect of ham radio, a core value for many amateurs.

"Ham operators are more than just hobbyists, we serve as a force multiplier for emergency communications in the event of emergencies," wrote Cian McCarron. "We serve in communities throughout the U.S. and every tool at our disposal is important, including the very airwaves we use. We are also instrumental in the development of new technologies that help push the boundaries of communication and we are already limited in our bandwidth, not just by our own licensee levels, but by that which is allocated to us, something we must protect to the best of our abilities."

One community radio advocate thinks there has been an overreaction to the possibility of interference. REC Networks told the FCC the plan is "ambitious" but would not "steal" spectrum from hams.

"For nearly a century, stations in the HF spectrum, including those with power and bandwidth that are equal or exceeding what SMC is proposing, have been operating in their appropriately allocated bands without interference to users of the HF spectrum in other bands and modes," REC stated in its comments.

"The conspiracies raised by some members of the ARS community are more tied to their political opposition to the financial and technology industries than it is cemented in daily practice and the International Radio Regulations."

Nevertheless, REC opposes the petition, because "when all else fails, HF spectrum is available for emergency communications in order to relay information to/from an area affected by an emergency, answer calls of distress and to assure the health and welfare of any person who is physically located in an affected area in the aftermath of a natural or man-made disaster."

Skywave Networks, a shortwave radio technology company, told the FCC it sees tremendous potential in the productive use of shortwave for long-distance, specialized, data transfer and supports the commission's efforts to open eligibility. However, "the commission must carefully consider an appropriate regime for the licensing of the 2–25 MHz band, including smaller limits on bandwidth and greater protections for co- and adjacent-spectrum users," the company wrote.

SMC argues that its proposed amendments to high-frequency rules would enhance the ability of users to quickly access "real-time financial data and continue to act in a manner to improve asset prices, to the benefit of centralized markets and market participants."

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Hams Worry About Shortwave Proposal...

Speaking out

The firms that make up the coalition are "market makers and liquidity providers" for exchanged-traded financial instruments. The coalition includes DRW Holdings, IMC Trading Group, Virtu Financial Inc., NLN Holdings, Optiver Services and Tower Research Capital.

The coalition believes that its changes also have the potential to spur additional innovations in the use of the 2–25 MHz Band frequencies. The petition claims it will be possible for their operations to coexist with other band licensees and said its own technical study supports that.

But it's not just hams that have expressed concerns.

The United States Coast Guard, the principal federal agency responsible for maritime mobility, safety and security, told the FCC that the Maritime Mobile Service or MMS is used extensively in multiple bands between 2 MHz and 25 MHz, and important for communications that go beyond line-of-sight.

In its opposition, the USCG said the proposed new data service will likely result in a "high use percentage as the market makers and liquidity providers update their bid/ask price continuously based on the most up-to-date information."

The Coast Guard is also concerned about cybersecurity issues "such as spoofing or jamming" that could cause interference with MMS.

NCTA–The Internet & Television Association told the commission that cable providers use 2–25 MHz for broadband and television services. It worries about disruption and degradation to those services, which they say the coalition doesn't mention, and would make the band inhospitable for current users.

It said one experimental licensee already disrupted commercial broadband and video service. "Comcast has directly experienced multiple occurrences of service disruption from one member of petitioners' coalition," the NCTA wrote, "caused by the exact type of operations petitioners are proposing here as a new licensed service."

NTCA continued:

"Each disruption resulted in customers experiencing packet loss, increased latency, slower and spotty broadband internet service, video channel changes and the inability to utilize certain Comcast devices with their services. This kind of disruption can also cause significant degradation to VoIP calls, including potentially for 911 calls."

NCTA goes on to detail a disruption in the Seattle area in 2022 and another in a more rural part of Washington state this year.

And an extensive filing in opposition was submitted by Alex Pilosov, founder and president of Shortwave Solutions. Pilosov presented detailed data and exhibits criticizing the coalition's request.

He says he is a consultant for a non-coalition company and that he manages system design and construction of an operational system that he described as the fastest operational HF connection on the Chicago-London route.

"Importantly, this lower-latency system operates with a spectrum efficiency that is over 1,000 times better than what the petition is seeking," Pilosov writes.

He says the coalition's request "is premature, incomplete and poorly thought out, and against the public interest," and that its "lack of substance is matched by its audacity."

Pilosov concluded: "(The) coalition's petition is extraordinary in its scope, and if granted, would result in loss of spectrum availability worldwide, turning the critical Fixed Service spectrum into a CB-radio free-for-all loudness contest."

LARGE ESTATE SALE

I have many items to sell. Most items have been tested and cleaned and are working to expectations. All listed prices are derived from previous sales of similar on QTH, QRZ, and Ebay. I am willing to negotiate. If you are interested in something, please let me know.

ICOM 756 HF Transceiver Recently tuned. Works great. Includes Icom power supply. $ 550

KENWOOD TS 940 SAT with SP 940 Speaker Excellent Condition $ 500

KENWOOD MC-90 Desk Mic Excellent Condition **$ 175**

ICOM IC 275/IC 475/Icom Power Supply/ ICOM SM-8 Desk Mic 2 Meter/440 all Mode pair of Transceivers. Both work well. Included are the matching power supply and desk mic with switchable inputs. $ 650

ASTRON LINEAR POWER SUPPLIES. RS-20M. $75. VS-20M. $75

MFJ DELUXE VERSATUNER II. Works as expected. $75

HYGAIN TAILTWISTER ROTOR WITH CONTROL BOX & 40 FT CABLE. Heavy duty version. $500

BIRD MODEL 43 METER WITH 6 SLUGS. Various frequencies and power levels. One slug not marked. $250

HEIL PROSET HEADSET For use with Kenwood (Adapter included). **$ 125**

Contact Pete, NY2V @ 315-427-1364

CALENDAR

November 8, 2023 - 7 pm - Regular monthly club meeting, East Greenbush Masonic Lodge - Loop Antennas

December 13, 2023 - Annual Holiday Party - Mosciatiello's Restaurant - 5:30 pm Cocktails / 6:30 pm Dinner

January 1, 2024 - ARRL annual dues increase takes effect

January 10, 2024 - Regular monthly club meeting, East Greenbush Masonic Lodge - Antenna Building Party

Pro Tip: Touch Lamps & RF

Touch lamps are RF-operated devices that often cause, or are susceptible to, EMI problems. They have a free running oscillator that is very broad and rich in harmonic energy. This oscillator is hooked up to a touch plate that changes the frequency of the oscillator when a hand is placed near the plate. Unfortunately, this plate also acts as an antenna, and the circuitry inside the lamp reacts the same way that it would when the plate is touched -- the lamp changes states from "off" to "on".

Although cases of moderate interference can sometimes be cured by using a "brute-force" type AC-line filter and/or a common-mode choke, most cases will require internal modification to the lamp.

A simple cure for those touch-controlled lamps that turn themselves on and off during nearby radio transmissions on 40 and 80 meter operation ia a 1k ohm resistor in series with the signal input lead (from the lamp base) to the encapsulated circuit that operates the lamp may cure the problem. If this isn't sufficient, add an RF choke (100 uH, 139 mA) in series with the resistor. The choke alone may be enough to clear up the problem in some cases. If these cures don't work, it may be possible to shield the electronic switch module, but this must be done safely!

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.

GEAR FOR SALE

- Cobra Ultra Lite 80-10M dipole $75.00 w/ balun.
- Heil RS 1 12' riser brand new $ 30.00

Contact Walt, N2WJR at N2WJR07@gmail.com

- Arrow 4 element 6 meter yagi, rated for 500 watts. Complete with stainless mounting hardware. Assembled and tested. Perfect condition. $35

Contact Steve, WB2HPR at svansick@nycap.rr.com

- Yaesu ft 891 box and manual included $475
- Discone antenna suitable for working 2. M. And 440 m and scanner $15.

Contact Don, KB2CDX at: ddm653@gmail.com

- PYRAMID 12V, 30 Amp power supply. Asking $35.00.

Contact John,WB2HZT at:
Radiowizzz@aol.com

Free:

- MFJ 40-6 meter Off Center Fed Dipole.
- 5/8 wave 10 meter telescoping vertical.

Contact WA2JAE at john.hackert@gmail.com

Sell your unused gear with a free ad in Sidebands!
Send details to:
W2RBJ@Outlook.com